DATA COLLECTION SYSTEM USING MEMORY CARD

FIELD OF THE INVENTION

This invention relates to a data collection system and in particular to the use of a memory card for identification and data collection.

BACKGROUND OF THE INVENTION

Description of the Prior Art

At trade shows and conventions, it has been common practice to issue identification cards to attendees who register and pay an admission fee. The identification card is used to collect, record and disseminate detailed information about the person to whom the card has been issued. In addition, identification cards are issued to the exhibitors, members of the press, and invited speakers, among others.

The badges are used for security purposes and for differentiating between paid attendees, exhibitors, the show management and service personnel, the press and other types of persons or groups that attend the show. To this end, the badges may have various identifying colors, different graphic designs, or other indicia. The badges may also reflect the particular days that a cardholder may attend the show. At the show, the badges are useful to the exhibitors to identify the company association of the individual visiting a booth, the person's title, and other information of interest.

An important use of the badge is to give the exhibitors as well as the show producers an opportunity to collect and record a list of the attendees, names, addresses, telephone numbers and other data that would enable followup by telephone or direct mailing of sales material. Previously the data were gathered by obtaining individual business cards, or if the attendee did not have a business card, then it would be necessary to have him write the information on paper. In some cases, the handwritten names or addresses were too illegible to be of any use. Since an exhibitor invests a significant amount of money to promote the products being displayed at the show, these prior approaches were not acceptable.

As a result, different types of identification badges have been developed to minimize the problems associated with the business card approach. One type of card encompasses data readable by the human eye which can be imprinted by a dot-matrix, thermal, laser or impact printer, for example. The imprinting may be formed directly on the card or on a label that is then attached to the card.

A second type of card uses a magnetic stripe or bar code which are readable by sensing devices. However the stripe or bar code cards are limited in size and data storage, and the technology involved does not allow a desired complete profile of the attendee. Generally with this type of card only an identification number is registered that is referenced to a number in a database stored in the proprietary computer of the show's management. Access to this computer is not available to the exhibitors. The show management controls the database to ensure data integrity and to keep the contents confidential. The show management uses the database to sell lists including information to advertisers after the show has closed. The machine-readable data can be stored for later use, printed or displayed on a video screen for editing or review.

Another approach to identification cards or badges is the use of optical character recognition (OCR) with embossed plastic cards. In such case, the card is readable by the human eye and also can be read by a machine. The characters embossed on the card can be scanned by a hand-held scanner and the data can be transmitted to a data processor or computer. These plastic cards are generally similar in size, shape and material to the widely used credit cards. However embossing of the data requires a number of machines of the size of home refrigerators. The cards can be embossed off-site and then mailed or distributed to the attendees at the show at a "will call" table. In such event, a major bottleneck occurs, particularly where there are thousands of attendees to service, so that the attendees must spend a long time on line to receive their badges. Also, the embossed card is limited to a small number of characters that can be recorded due to the size of the card or badge. Since the embossed characters need to be human-readable and the badge is of a limited standard size and can be printed for reading on only one side, the usual limitation is 100 to 200 characters per badge. In many cases it is necessary to abbreviate certain words, which may lead to errors in interpretation of attendee data.

After a badge or card has been embossed, it is generally placed in a plastic holder having a pin so that the badgeholder can wear the badge to gain entry to the show and during attendance at the show. However when the attendee is at an exhibitor's booth in which there is interest in the products of the exhibitor, the plastic badge is usually removed from the plastic holder to be imprinted on a machine that will provide a physical record of the attendee's data. The device used for imprintinq is similar to the type used for imprinting credit cards, which requires a paper slip with a carbon copy form. To effectuate the imprinting, a manually operated hand roller is pulled back and forth over the card and the paper slip and carbon form. The raised letters on the embossed card enable the imprinting of the data from the card. It is apparent that the imprinting mechanism is subject to wear, and that the embossed card may be worn smooth so that the imprinting may not be effectively accomplished. If the form is not properly aligned, the imprinted data may not be readable.

Another problem with the plastic card is that it is not correctable. Thus if an error is made in recording any data, the badge is discarded and a corrected badge prepared. If not, the error must be corrected by each person or company that receives the erroneous data registered on the badge.

Another problem that is encountered with the embossed badge is the requirement that the information recorded on the badge needs to be manually typed onto mailing labels or separately keyed into a computer for processing whenever an exhibitor wishes to mail sales material to attendees who have expressed an interest in the products of the exhibitor. Obviously this becomes an expensive, time-consuming job. Also mailing labels that are prepared by typing may be illegible or contain errors in the names or addresses.

In view of the problems associated with embossed cards, bar code, magnetic stripe and computer networking technologies are increasingly being used. Systems for transferring and storing data using portable electronic devices in the form of flat cards in which logic